

Title (en)

Method of setting reference data for inspection of solder fillets and inspection device using same

Title (de)

Verfahren zur Erstellung von Referenzdaten zur Prüfung von Lotkehlen und Prüfvorrichtung hierzu

Title (fr)

Procédé de configuration de données de référence pour inspection de raccords de soudage et dispositif d'inspection l'utilisant

Publication

EP 1887518 A3 20150812 (EN)

Application

EP 07111111 A 20070627

Priority

JP 2006220689 A 20060811

Abstract (en)

[origin: EP1887518A2] Reference data for automatically inspecting shapes of fillets formed on a substrate are set to an inspection device that illuminates the substrate from specified directions to generate an image. For each type of components mounted to the substrate, a database is prepared, registering sets of reference data corresponding to different fillet shapes in correlation with heights of solder for forming fillets having these shapes. After components to be an object of inspection are identified, specified steps are carried out on each of these components, including the step of obtaining data on the height of solder for forming the fillet related to a land for which a target area for inspection has been set and reading out reference data corresponding to the data obtained from the reference data registered in the database.

IPC 8 full level

G01B 11/24 (2006.01); **G01N 21/00** (2006.01); **G01N 21/93** (2006.01); **G01N 21/956** (2006.01); **G06T 7/00** (2006.01); **H05K 3/34** (2006.01); **H05K 13/08** (2006.01)

CPC (source: EP US)

B23K 31/125 (2013.01 - EP US); **G01N 21/95684** (2013.01 - EP US); **G06T 7/001** (2013.01 - EP US); **G01N 2021/95669** (2013.01 - EP US); **G06T 2207/30141** (2013.01 - EP US); **G06T 2207/30152** (2013.01 - EP US)

Citation (search report)

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- [A] US 5064291 A 19911112 - REISER KURT [US]
- [A] TOSHIFUMI HONDA, YUKIO MATSUYAMA, HISAE YAMAMURA, HIDEAKI SASAZAWA, TAKANORI NINOMIYA, LUDWIG LISTL, ANTON SCHICK AND RICHARD S.: "Automated Visual Inspection Algorithm for Solder Joint of SurfaceMount Devices Based on Three-Dimensional Shape Analysis", MVA96, IAPR WORKSHOP ON MACHINE VISION APPLICATIONS, November 1996 (1996-11-01), Tokyo, Japan, XP002741776, Retrieved from the Internet <URL:http://www.cvl.iis.u-tokyo.ac.jp/mva/proceedings/CommemorativeDVD/1996/papers/1996261.pdf> [retrieved on 20150703]

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Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

EP 1887518 A2 20080213; **EP 1887518 A3 20150812**; **EP 1887518 B1 20180530**; CN 101122569 A 20080213; CN 101122569 B 20100609; JP 2008045952 A 20080228; JP 4103921 B2 20080618; TW 200814870 A 20080316; TW I358244 B 20120211; US 2008040058 A1 20080214; US 7961933 B2 20110614

DOCDB simple family (application)

EP 07111111 A 20070627; CN 200710140904 A 20070810; JP 2006220689 A 20060811; TW 96128789 A 20070806; US 88016907 A 20070720